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AUTHOR	Lee, Sharon M.
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ABSTRACT

This report addresses issues that data users will face in using, interpreting, and presenting new data on race from the 2000 census, which allowed multiple racial responses. Changing how the census collects data on race is not new. Almost every census for the past 200 years has collected racial data differently than the previous census. New federal standards of collecting data on race were implemented to reflect increasing racial diversity in America and the growing number of multiracial people (particularly children). The new racial data collection standards provide a more realistic and accurate portrait of the United States. The number of people who identify with more than one race is likely to increase as interracial marriages increase and more people acknowledge their multicultural backgrounds. The new standards of collecting data on race will affect children more than adults, with more children being born to parents of different races. Data from the 2000 census show that 4 percent of children under age 18 years are multiracial, compared with 2 percent of adults. Data on race from the 2000 census cannot be directly compared with 1990 census data. Therefore, interpreting changes by racial categories from 1990-00 should be done cautiously. (Contains 26 references.) (SM)

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A KIDS COUNT/PRB Report on

CENSUS 2000

Using the New Racial Categories in the 2000 Census

By Sharon M. Lee

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Using the New Racial Categories in the 2000 Census

By Sharon M. Lee
Portland State University

The Annie E. Casey Foundation and
The Population Reference Bureau
March 2001

EXECUTIVE SUMMARY

In the 1990 census, half a million people disobeyed instructions to mark only one race and checked two or more races instead (Wallman et al., 2000). The 2000 census allowed multiple racial responses, and 7 million people took advantage of the change in racial reporting. Claire Oliveros of Portland, Oregon, was one of them, checking off Asian and white as she thought of her grandmothers—one Filipino, the other, Jewish (Chuang, 2001). Most people would agree that allowing the option of marking more than one racial category provides a more accurate, if complex, portrait of diversity in America. For data users, however, the new standards, including the multiracial option, also present challenges (O'Hare, 1998). This report addresses some of the main issues that data users will face in using, interpreting, and presenting the new racial data.

- Changing the way we collect data on race in the census is not new. Almost every census for the past 200 years has collected racial data differently than the one before it.
- The new federal standards of collecting data on race were implemented to reflect the increasing racial diversity in America and the growing number of people, especially children, who are multiracial. The dilemma facing school children forced to select one race when they had parents of different races is one of the major reasons for the shift.
- The new standards for collecting data on race provide a more realistic and accurate portrait of our nation.
- The number of people who identify with more than one race is likely to increase as interracial marriages increase and more people acknowledge their multiracial backgrounds.
- The new standards of collecting data on race will affect children more than adults. The growing number of interracial marriages means there are more children being born to parents of different races. Data from the 2000 census show that 4 percent of children under 18 years old are multiracial, compared with 2 percent of adults.
- Data on race from the 2000 census cannot be directly compared with 1990 census data. Therefore, interpreting changes by racial categories from 1990 to 2000 should be done cautiously.

COLLECTING DATA ON RACE AND THE ROLE OF THE CENSUS

The collection of racial statistics in the United States has a long history. The first population census, conducted in 1790, did not have a question on race, but it did collect data on "free" people and slaves. Since no whites were enslaved at that point, this was a *de facto* enumeration of the white and nonwhite population (Anderson, 1988). It is a common misperception that there has always been a consistent understanding and measurement of race in federal statistics (Anderson, 1988; Lee, 1993). In the past, race was understood as a biological concept. Census enumerators were instructed to report a person's race based on observation. Today, there is general agreement among social scientists that race and ethnicity are *social constructions*. While there are well-known relationships between genetic background and some diseases (for example, a genetic predisposition for sickle cell anemia among people with African ancestry or Tay-Sach's disease among people with Jewish ancestry), humans cannot be scientifically classified into races on the basis of biological factors. Instead, race as social construction means that certain physical characteristics, such as skin color, are used to separate people into racial categories. Membership in racial categories, in turn, shapes the social status and experiences of individuals, from childhood to old age.

If race is a social construction, why does the federal government continue to expend large amounts of time and money to collect racial data? The answer is not simple. The most important reason is probably that race continues to be a social reality in U.S. society. This means that people continue to be identified and categorized into races, and that their racial identity remains fundamental in shaping their opportunities, rewards, and social experiences. For example, racial minorities such as African Americans and American Indians continue to have far higher poverty rates than whites. Data show consistently higher rates of illness for African

Americans for many diseases, including diabetes and stroke. Researchers have also reported the disturbing finding that racial minorities do not receive the same amount and quality of health care as whites, and that higher percentages of racial minorities lack health insurance and therefore access to health care.

The reality of race in American society in limiting opportunities is recognized in laws that seek to prevent racial discrimination, such as the Civil Rights laws of the 1960s and the Voting Rights Act of 1965. As long as racial discrimination exists, the federal government needs data on race to document it. Racial data are also required to ensure compliance with civil rights laws. Besides the federal government, many advocacy groups are interested in reducing or eliminating the socioeconomic gap between whites and racial minorities. These organizations depend on racial data to help them understand and track the effectiveness of programs designed to assist disadvantaged racial groups.

Therefore, until the day comes when race no longer helps determine an individual's or a group's opportunities in U.S. society, the federal government and other agencies remain committed to collecting racial data. In this effort, the U.S. census conducted every ten years plays a key role because it is the most reliable source of racial data for the nation. Census data are used for reapportionment purposes by the Congress and redistricting by states, for allocating federal funds, for monitoring programs and enforcing compliance with civil rights legislation, for estimating population figures between censuses, for projecting future population trends for the nation, and for a wide range of other statistical purposes.

THE SHIFT FROM "MARK ONE RACE ONLY" TO "MARK ONE OR MORE"

The Old Standards: Statistical Directive No. 15, 1977

In the 1980 and 1990 censuses, collecting and reporting data on race was guided by the Office of Management and Budget's (OMB) "Statistical Policy Directive No. 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting" (OMB, 1977). The civil rights laws of the 1960s created the need for better collection of data on race and ethnicity. As these data collection efforts grew, so did the need for federal guidelines on racial and ethnic categories. Directive 15 was the culmination of efforts by federal agencies, under the leadership of OMB, to develop government-wide standards for data on race and ethnicity. It represented the first federal government standard for the collection and presentation of race and ethnic data.

Directive 15 specified that data on race be reported for four mutually exclusive single race categories. This list was considered exhaustive in that adding across the four racial categories totaled 100 percent of the population. The four races were:

- White
- Black
- American Indian and Alaskan Native, and
- Asian and Pacific Islander

Directive 15 also specified that data on ethnicity (people of Hispanic origin or Not of Hispanic origin) be collected. Hispanics could be of any race.

Opposition to Directive 15

By the 1990s, the U.S. population had experienced dramatic changes in its racial and ethnic composition, and people began to question the validity of the existing racial classifications. Opposition to Directive 15 was voiced by parents in interracial marriages who were told to

choose only one race for their multiracial children when they registered their children for school. Large numbers of immigrants (especially from Latin American and Arab countries) complained that none of the four main racial categories applied to them, and many people (especially people of Hispanic origin) chose "other race" on the 1990 form. The growing effect of intermarriage was reflected in the fact that about half a million people ignored the instruction to mark only one race and selected more than one race in the 1990 census instead (Wallman et al., 2000). In addition, many of the people who marked "some other race" in the 1990 census reported ancestries (on the ancestry question) indicating multiple racial backgrounds. Data users and community groups added to the call to change federal standards of racial reporting to better reflect a U.S. population with new immigrants and a growing multiracial population.

Reviewing Directive 15, 1993-1997

In response to these criticisms, OMB began a review of the existing race standards in 1993. This review included the following:

- In 1993, Congressman Tom Sawyer, then Chairman of the House Subcommittee on the Census, held four public hearings that included 27 witnesses, focusing on the use of racial categories for the 2000 census.
- At the request of OMB, the National Academy of Sciences' Committee on National Statistics (CNSTAT) conducted a workshop in February 1994 to discuss issues that needed to be addressed in OMB's review. Workshop participants included representatives from federal agencies, universities, interest groups, and businesses. A summary of the workshop can be found in Edmonston et al. (1996).

- In 1994, OMB requested public comment on the racial and ethnic classifications used in the 1980 and 1990 censuses, and received nearly 800 responses. OMB also heard from 94 witnesses at hearings during July 1994 in Boston, Denver, San Francisco, and Honolulu.

Research and Testing of Various Proposed Changes

The review process also involved research and testing of various proposed changes. The research agenda was developed by the Interagency Committee's Research Working Group, co-chaired by the Census Bureau and the Bureau of Labor Statistics (BLS), and consisted of three major national tests:

- In May 1995, the BLS sponsored a Supplement on Race and Ethnicity to the Current Population Survey (CPS). A summary of the results can be accessed on the Web at: www.bls.gov/news.release/ethnic.toc.htm (U.S. Department of Labor, Bureau of Labor Statistics, 1996).
- As part of its research for the 2000 census, the Census Bureau tested alternative approaches to collecting data on race and Hispanic origin in the March 1996 National Content Survey (U.S. Census Bureau, 1996). Highlights of the report can be found at: www.census.gov/population/www/documentation/twps0016/twps0016.html.
- In June 1996, the Census Bureau conducted the Race and Ethnic Targeted Test (U.S. Census Bureau, 1997) to assess the effects of possible changes on smaller populations such as American Indians, Alaskan Natives, and specific Asian and Pacific Islander and Hispanic groups. Highlights of this report can be found at: www.census.gov/population/www/documentation/twps0018/twps0018.html.

In addition to these three major tests, the National Center for Educational Statistics and the Office of Civil Rights in the Department of Education jointly conducted a survey of 1,000 public schools on how schools collect racial data, and their relationship to federal standards (NCES, 1996). Other studies by the National Center for Health Statistics and the Centers for Disease Control and Prevention were also conducted to evaluate the quality of data on race and Hispanic Origin in administrative records.

New Standards on Race and Ethnicity Issued, 1997

Based on the results of these studies, the Interagency Committee published the "Report to the Office of Management and Budget on the Review of Statistical Policy Directive No. 15." This 1997 report, which was made available to the public for comment, included the committee's recommendations for reporting race and Hispanic origin in the 2000 census. Highlights of this report can be found at: www.census.gov/population/www/socdemo/race/Ombdir15.html.

OMB received about 300 letters and thousands of postcards from individuals and groups in response to the recommendations. After careful review of the Interagency Committee's report and the public's response, OMB announced revised standards for federal data on race and ethnicity in October 1997.

The new standards contain two important changes. First, there are now five minimum categories of race, instead of four. The "Asian and Pacific Islander" category is now divided into two groups, "Asian," and "Native Hawaiian and Other Pacific Islander." The new racial categories are as follows:

- American Indian and Alaska Native
- Asian
- Black or African American
- Native Hawaiian and Other Pacific Islander
- White

A second, and more profound, change allows people to identify themselves as belonging to one or more races. On the 2000 census race question, respondents are instructed to mark all races that apply to indicate their racial identity.

REMINDERS AND CAVEATS CONCERNING RACIAL DATA

Before proceeding further, there are four important reminders to the reader about how data on race are collected and reported in the census.

- ***Changing the way we collect data on race is not new:*** Almost every census for the past 200 years has collected racial data differently than the one before it. While there is a great deal of attention to the 2000 census and the consequences of allowing respondents to check more than one race, it should be noted that earlier censuses also collected data on people of multiple racial backgrounds. For example, various black and white multiracial combinations (mulatto, quadroon, and octoroon) were listed as separate races in the census from 1850 to 1920. Mulatto as a racial choice was offered up to the 1920 census (Lee, 1993).
- ***Data on race are different from data on Hispanic origin:*** This report deals with race data. Federal guidelines on race and ethnicity state that people of Hispanic origin can be of any race. The 1990 census data and more recent estimates from the Current Population Surveys show that over 90 percent of people who report Hispanic origin report their race, or are categorized, as white. Recently released data from the 2000

census report that 48 percent of Hispanics report their race as white only and 42 percent as "some other race" only (U.S. Census Bureau, 2001). In the 1990 questionnaire, the race question preceded the Hispanic origin question, but in the 2000 census, the order of questions was reversed. This was designed to increase the response rate of Hispanics to the race question.

- ***There are different ways to present data on the multiracial population:*** Prior to the release of 2000 census data, there were extensive discussions by the Office of Management and Budget (OMB), the Census Bureau, and other federal agencies on final guidelines for presenting racial data from the 2000 census. Draft provisional guidelines were first issued by OMB in 1999. These were substantially revised and re-issued in December 2000. (These guidelines can be accessed online at: http://www.whitehouse.gov/OMB/inforeg/index.html#SP). Additional guidelines for use in civil rights monitoring and enforcement were issued in March 2000 (http://www.whitehouse.gov/OMB/bulletins/b00-02.html). OMB, the Census Bureau, and other agencies have conducted extensive research on different ways of presenting race data from the 2000 census. Early releases of race and Hispanic origin data from the 2000 census (U.S. Census Bureau, 2001) indicate that detailed racial categories will be used for some census products.
- ***Racial identity and reporting are unstable:*** Racial reporting at the individual level can be influenced by a range of factors. "*Situational ethnicity*" is the term that is used to describe the highly changeable character of racial and ethnic identity. Social scientists have shown that situational factors, such as perceived benefits or disadvantages associated with a choice of racial identity in a particular situation affect an individual's

response to a question on racial identity. For the 2000 census, many advocacy groups for racial minorities encouraged multiracial people to report only a single race (the minority race). A further consideration is that some of those who chose not to mark more than one race on the 2000 census may identify themselves as multiracial in another situation—on health surveys or college application forms, for example. Another factor that makes racial classification difficult is that many people are not aware of their own genealogy or ancestry. For example, people who marked more than one race in the 2000 census represent only a subset of the total population of multiracial people because some may be unaware of their family backgrounds, and some who are aware may decide to report just a single race. Finally, the method used in collecting racial data also influences racial reporting. People respond differently to mail surveys versus personal interviews, for example. Thus, it is unrealistic to expect a high degree of consistency across different data sets because an individual's answers may vary over time and across different situations.

WILL POPULATION COUNTS BY RACE BE AFFECTED, AND BY HOW MUCH?

A major concern for data users is the extent to which the new multiracial category will affect the U.S. racial distribution. Data from the 2000 census show the following racial distribution for the United States (U.S. Census Bureau, 2000; 2001), totaling 100 percent:

One race:	Total	Under 18
White:	75.1 percent	68.6 percent
Black:	12.3 percent	15.1 percent
American Indian and Alaskan Native:	0.9 percent	1.2 percent
Asian:	3.6 percent	3.4 percent
Native Hawaiian and Other Pacific Islander:	0.1 percent	0.2 percent
Some other race:	5.5 percent	7.6 percent
Two or more races:	2.4 percent	4.0 percent

If race and Hispanic origin are combined, the U.S. population consists of the following racial/ethnic groups:

	Total	Under 18
Non-Hispanic:		
One race:		
White:	69.1 percent	60.9 percent
Black:	12.1 percent	14.7 percent
American Indian and Alaskan Native:	0.7 percent	0.9 percent
Asian:	3.6 percent	3.3 percent
Native Hawaiian and Other Pacific Islander:	0.1 percent	0.2 percent
Some other race:	0.2 percent	0.3 percent
Two or more races:	1.6 percent	2.6 percent
Hispanic (any race):	12.5 percent	17.1 percent

Of the 281.4 million people counted in the 2000 census, about 6.8 million (2.4 percent) identified with two or more races. This represents a relatively small percentage of the total U.S. population. However, the multiracial population is larger for certain geographic areas and subgroups of the population. *Children* are more likely to be multiracial than adults are. The percentage of a given racial group reporting as multiracial is also related to the *relative size of a group* (numerically smaller populations tend to have a higher percentage of multiracial people) and *geographical location* (people in urban areas and places with high rates of interracial marriage are more likely to be multiracial).

Children Are More Likely To Be Multiracial

In the 2000 census, about 4.0 percent of children were identified as multiracial, compared with 1.9 percent of adults. This tendency is more pronounced among some groups than others. For example, the Asian American population was very small prior to recent large-scale immigration after amendments to U.S. immigration laws in 1965. However, intermarriage rates among Asians in recent years are quite high, especially among native-born Asian Americans (Lee and Fernandez, 1998). This is the main reason why a higher percentage of multiracial

Asian Americans (meaning people with Asian and another racial background) are in the younger age groups. In Maryland, for example, about 20 percent of Asian children were identified as multiracial in the 2000 census, compared with only 8 percent of Asians age 18 and over.

In contrast, the age distributions of multiracial American Indians and blacks are more even across age groups, reflecting the long history of intermarriage between American Indians and other races, and fairly low intermarriage rates among blacks.

Smaller Groups Are More Likely To Be Multiracial

Data from the 2000 census and findings from earlier research (Edmonston and Lee, 2000; Goldstein and Morning, 2000) have shown that a higher proportion of the populations of smaller groups are multiracial. For example, 2000 census data indicate that about 40 percent of American Indians are multiracial, reporting American Indian and at least one other (usually white) race. Another group with a substantial multiracial population are Asians: 14 percent of Asians report at least one other race (usually white), compared with 5 percent of blacks and 3 percent of whites.

The relatively large number of Asians and American Indians who marked more than one race in the 2000 census makes it difficult to calculate the exact size of these groups. For example, the size of the American Indian and Alaska Native population could be as low as 2.5 million or as high as 4.1 million, depending on how the multiracial American Indian population is classified. It also becomes a challenge to measure the growth or decline of racial groups since 1990. Using the single-race definition, the American Indian population grew by 26 percent, but under an alternative definition, which counts both single-race and multiracial American Indian groups, the population grew by 110 percent. The latest data confirm what previous studies had

shown, that census data on the American Indian population are not reliable (Snipp, 1986). In certain geographic areas with high rates of intermarriage, the single-race counts of the American Indian and Asian populations may show declines because of the new multiracial categories.

People In Urban Areas Are More Likely To Be Multiracial

Analyses by Farley (2000) and del Pinal et al. (2000) have shown that the size of the multiracial population varies in different localities. Analyses of 2000 census data show that the percent of people reporting more than one race is relatively high in Honolulu, Hawaii (14.9 percent); the Bronx, New York (5.8 percent); and Portland, Oregon (4.2 percent); and relatively low in Madison County, Mississippi (0.5 percent) and Luzerne County, Pennsylvania (0.6 percent). These data show that large urban areas in the West and Northeast are more likely to have high percentages of multiracial people (because of racially diverse populations and higher intermarriage rates), compared with small rural areas in the South and other areas with less racial diversity and lower rates of intermarriage.

In addition, the multiracial combinations vary by location. In Honolulu, Hawaii, the most common combinations are: White/Asian, White/Native Hawaiian, and Asian/Native Hawaiian. In Portland, Oregon, the most common combinations are: White/American Indian, White/Other Race, and White/Asian. However, in the east, for example, Bronx, New York, the most common combinations are: White/Other Race, Black/Other Race, and White/Black.

The available data from the 2000 census show that the new method of racial reporting *does affect the racial breakdowns for the U.S. population, especially for children*, but that the *impact is not very large overall*. Some of the smaller racial populations such as American Indians, Asians, and Native Hawaiians and Other Pacific Islanders are affected more than the

larger black and white populations, but on the whole, the *changes do not substantially affect the relative distribution of the main racial populations*. Whites remain the largest racial population, followed by Blacks/African Americans, Asians, American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders.

HOW SHOULD DATA ON RACE BE REPORTED?

The Office of Management and Budget (December, 2000) has issued provisional guidelines for the implementation of the 1997 standards for federal data on race and ethnicity, including race data from the 2000 census. Final guidelines are expected later in 2001 after OMB considers written responses to the provisional guidelines. All federal statistical agencies are required to follow OMB's guidelines on the collection and presentation of data on race and Hispanic origin. OMB's provisional guidelines for racial data presentation are based on the following principles:

- The minimum set of categories for data on race for federal statistics, program administrative reporting, and civil rights compliance reporting are the following five single racial categories: American Indian and Alaska Native, Asian, Black or African American, Native Hawaiian and Other Pacific Islander, and White.
- For the purpose of the 2000 census data collection, OMB granted permission to the Census Bureau to include a sixth category of "Some Other Race," similar to the "Other Race" category that was used in the 1990 census. Data on people who chose "Some Other Race" will be included in Census Bureau tabulations.
- With the change to allow people to mark more than one race in the 2000 census, OMB's guidelines state that at a minimum, the total number of people identifying with more than

one race must be reported. However, "agencies are strongly encouraged to report detailed information on specific racial combinations subject to constraints of data reliability and confidentiality standards" (OMB, December, 2000: 11-12). In other words, because the multiracial population is fairly small, concerns with data quality and confidentiality require judgement on the part of users to decide the amount of detail provided on the multiracial population. "Some balance will need to be struck between having a tabulation showing the full distribution of all possible combinations of multiple race responses and presenting only the minimum—that is, a single category of people who reported more than one race" (OMB, December, 2000: 7).

- OMB (December, 2000: 12-14) also advised that presentation of race data be guided by the following considerations, because of the wide range of potential users of race data from the 2000 census:

  Range of applicability: Tabulation procedures that can be used over a wide range of programs are preferred over those with limited applicability.

  Statistically defensible: Tabulation procedures should follow recognized statistical practices.

  Ease of use: Tabulation procedures should be easily used by a wide variety of people, including people with little knowledge of statistical practices.

  Understandability and communicability: Tabulation procedures should be easily understood by, and communicated to, a wide variety of users and the public.

The "Minimum" Way of Presenting Race Data

Prior to the 2000 census, at the minimum, most race data would have been collected and presented for the following five racial categories: White, Black, Asian and Pacific Islander, American Indian and Alaskan Native, and "Other Race." For the 2000 census, seven mutually exclusive racial categories are possible:

- American Indian and Alaska Native Only
- Asian Only
- Black or African American Only
- Native Hawaiian and Other Pacific Islander Only
- White Only
- Some Other Race Only
- Two or More Races

Theoretically, there are 57 possible combinations of two or more races. Adding this to the six main single race groups would produce 63 possible racial categories. For practical purposes, it is not likely that the majority of users of census race data would want race data presented for all 63 categories. Multiplying these 63 categories by the Hispanic/non-Hispanic division would produce a theoretical maximum of 126 racial/ethnic categories. OMB's report (December, 2000: Chapter 3) contains guidelines for presenting 2000 census race and ethnic data for various census products. For example, the recently released Restricting Data Summary File presents data down to the census block area for the 63 racial categories along with subtotals for the population of one race, two or more races, and for each combination of two races, three races, four races, five races, and six races (U.S. Census Bureau, March 2001). Plans are still in development for how race data will be presented in future census products, including the public use micro-data sample (PUMS) files.

An "Expanded" Way of Presenting Race Data

Most data users may not require such detailed breakdowns of race data. However, if aggregating all multiracial people into a single "Two or More Races" category is inadequate for the data user's purposes, and more detailed information on different multiracial groups are needed, one option is to employ an expanded list. The expanded option may be preferred when the data user has good reason to believe that different multiracial combinations are substantively

different from one another. The expanded list may include the most common multiple racial combinations. Data from the 2000 census show that the most common multiracial combinations are white and American Indian and Alaska Native (1 million), white and Asian (868,000), white and black (785,000), and black and American Indian and Alaska Native (182,000).

Considering the size of different multiracial groups, one option for reporting the multiracial population is to present specific counts and perhaps selected characteristics (such as income, education, poverty rate) for only the four largest multiracial groups identified by the Census Bureau. Other combinations of more than one race could be aggregated into a remaining "all other more than one race" category. This would produce the following list of 11 racial categories:

- American Indian and Alaska Native Only
- Asian Only
- Black or African American Only
- Native Hawaiian and Other Pacific Islander Only
- White Only
- Some Other Race Only
- White and Black or African American Only
- White and American Indian and Alaska Native Only
- White and Asian Only
- Black or African American and American Indian and Alaska Native Only
- All Other Two or More Races

Is There a "Best" Option for Presenting Race Data?

Unless there are compelling reasons to do otherwise, *data should be presented for the multiracial population separately*, in accordance with OMB's guidelines to allow data to reflect the full range of people's subjective racial identities. The minimum presentation of seven categories (six single races plus an aggregated "more than one race" category) may be adequate for many users. It is unlikely that the average data user will need to have data for all possible 57

combinations of two or more races. Whether even the expanded list of 11 categories, which includes the most frequent combinations, is needed depends on three main considerations:

- The data user's mission and goals;
- Purpose of the data, that is, what the data are used for; and
- Whether the data user's clients are primarily single race groups or include substantial numbers of multiple race groups.

If a data user's clientele is primarily a single race group, such as African American children, then the minimum option of seven categories would probably be adequate. If necessary, multiracial children who are identified as black and some other group could be allocated to a single race category following OMB's guidelines on allocation for civil rights monitoring and enforcement (OMB, March 2000). Of course, if an agency's clientele includes substantial numbers of particular combinations of multiracial people (for example, black and American Indian, or Native Hawaiian and Asian), then it may be important to have separate categories for these multiracial groups.

Ultimately, *there is no single method of presenting race data that is the "best" for all data users*. Each option for presenting race data has advantages and disadvantages associated with it. Because agencies vary in their mission and goals and the clientele served, each will have to decide what is the "best available" option for it, given its goals, the purpose of the data, and the racial composition of its clientele. If an agency clearly states its reasons for choosing a particular approach, and acknowledges that this is the "best available" (not necessarily the "best") option, then the option can be justified and will likely be a satisfactory choice.

BRIDGING 1990 AND 2000 RACIAL DATA

Data users who are primarily interested in trends and changes in economic, social, and health characteristics by race may need to consider bridging methods to help understand the new race data. The "bridge period" refers to a temporary period of time when data users may use two estimates: one based on the new race data, and a second "bridging estimate" based on a method of predicting what responses would have been if collected under the old racial categories. Bridge estimates would no longer be needed once the bridge period ends (OMB, December 2000: 85). Measuring change over time is the most important criterion for bridging because the main purpose of any bridge to data collected in the past is to measure "real or true" change vs. change produced by the new methodology. For example, a data user wants to compare child poverty rates by race using 1990 and 2000 census data. She observes a decline in child poverty among Asian children. Is this a "real" change in child poverty among Asian children or is it an artifact of the change in racial data methodology? The change in reporting of race can therefore complicate the analysis and interpretation of social, economic, health, and other trends (O'Hare, 1998).

As a general strategy, data users should evaluate their need for bridging. "It should not be assumed that bridging is useful or required in every situation" (OMB, December 2000: 85). If data users can tolerate discontinuity in their data series or if other data are available to provide sufficient information for analyzing change, then bridging may not be necessary. However, if bridging is required, then alternative methods should be carefully evaluated. Historical bridging methods essentially entail taking responses to the new 1997 racial categories (for example, 2000 census data) and reclassifying them as closely as possible to the responses that would have been provided under the old racial categories (for example, 1990 census data). It also means that the

only new racial responses of interest are the multiracial responses since single race responses are assumed to be similar to past responses.

Different Bridging Methods

The ideal bridging method would be one that determines how a person would have answered the 2000 census question on race if the old 1977 standards for racial data had been used. In this ideal situation, any difference between 1990 and 2000 census-based data would indicate true change. However, this is not possible when comparing 1990 and 2000 census data since data were collected using two different sets of standards. Several bridging methods were evaluated by a group of federal statistical and policy analysts (OMB, December 2000: Appendix C, The Bridge Report). Table 1 shows the various historical bridge tabulation methods.

Table 1: Overview of Framework for Historical Bridge Tabulation Methods

	Is a person assigned to a category by a fixed rule or by a probability method?	
Is a person assigned to one or more than one category?	Deterministic[a]	Probabilistic[b]
Whole assignment[c]	Smallest Group Largest Group other than White Largest Group Plurality	Equal Fractions NHIS Fractions[e]
Fractional assignment[d]	Equal Fractions NHIS Fractions	Not Applicable

[a] A person is assigned to a category following a set of predetermined rules.
[b] A person is assigned to a category based on a probability distribution.
[c] A person is assigned completely to one category.
[d] A person is assigned partially to each selected category.
[e] Fractions based on findings from the 1993-1995 National Health Interview Surveys.
(Source: OMB, December 2000: Table 1, Appendix C)

The different methods vary by whether a multiracial response is assigned to a single category (called "whole assignment") or to multiple categories (called "fractional assignment"), and whether the assignment is based on deterministic/fixed rules or by a probability method. The *whole assignment, smallest group* method assigns responses that include white and another group to the other group since white is always the larger group. If responses include two races other than white (for example, black and American Indian), then responses are assigned to the smallest group. In this example, the individual would be classified as American Indian. The *whole assignment, largest group other than white* method assigns responses that include white with some other races to the largest minority group (for example, a white, Asian, and Hawaiian response is assigned to Asian), but if the responses include only minority races, responses are assigned to the largest group (for example, a response of black and Asian is assigned to black). The *whole assignment, largest group* approach allocates responses to the largest group mentioned. In this case, anyone who identified themselves as white and some other race would be assigned to white.

A fourth method, *whole assignment, plurality*, assigns responses based on data from the National Health Interview Surveys (NHIS). The NHIS allows respondents to select more than one race but records only the first two races mentioned. There is a follow-up question asking respondents to choose their "main race" from the first two choices. The proportion choosing each of the two possibilities is then calculated. Multiple race responses are assigned to the race that had a plurality of answers to the "main race" question in the NHIS.

Table 2 shows responses to the "main race" question for the four most common multiracial combinations in the NHIS. Almost half of White/Black people chose black as their main race. Over 80 percent of White/American Indian people chose white as their main race,

almost half of White/Asian people chose white as their main race, and over 85 percent of Black/American Indian people chose black as their main race.

Table 2: Percent Distribution of Main Race for Most Common Multiracial Combinations

	Multiracial Combination			
Main Race	White/Black	White/Am. Indian	White/Asian	Black/Am. Indian
White	25.2	80.9	46.9	---
Black	48.2	---	---	85.4
American Indian	---	12.4	---	7.0
Asian	---	---	34.6	---
Other[a]	26.6	6.7	18.4	7.6

[a] Includes people who said they were "multiracial" rather than choosing a main race.
--- Not Applicable.
(Source: OMB, December 2000: Table 3, Appendix C. Data are from the 1993-1995 NHIS)

The *fractional assignment, equal fractions* method assigns multiple responses in equal fractions to the races mentioned. For example, responses with two races are assigned half to each group, responses to three races are assigned one-third each, and so forth. The fractions must sum to 1. Another method, *fractional assignment, NHIS fractions*, allocates responses using NHIS fractions (displayed in Table 2). A response of White/Black would thus be assigned as 25 percent white, 48 percent black, and 27 percent "other."

In addition to these six methods, the Bridge Report also evaluated the *all inclusive allocation* method. This approach allocates multiracial respondents to every racial category that is mentioned. For example, someone who checks white, Asian, and Hawaiian would be allocated to all three categories. The distribution of the categories, for example, Asian, would have both a minimum count (including people who checked single Asian race only) and a maximum count (including everyone who checked Asian race, singly or in combination with other races). The all

inclusive allocation method produces an upper and lower bound for the percent change in the population, which may be confusing to some readers. In addition, counts do not sum to 100 percent because multiracial responses are counted more than once.

Findings from Evaluation of Different Bridging Methods

Data from the NHIS (1993-1995), the May 1995 Supplement on Race and Ethnicity to the Current Population Survey (CPS), and the 1998 Washington State Population Survey (WSPS) were used to evaluate the different methods. The methods were evaluated on several criteria, including: measuring change over time, congruence with respondent's choice, range of applicability, meeting confidentiality and reliability standards, minimizing disruptions to the single race distributions, statistical defensibility, ease of use, skill required, and understandability and communicability. Probabilistic/Fractional Assignment methods were not considered because they were unnecessarily complex and did not improve on other methods. The two Probabilistic/Whole Assignment methods yielded results similar to the Deterministic/Fractional Assignment methods, so the Bridge Report presented findings from evaluating only the seven methods described above (OMB, December 2000: Appendix C, Bridge Report).

Conclusions from the evaluation are used to suggest some bridging strategies for users. However, as the report notes: "All these conclusions should be viewed with caution. Many assumptions had to be made in these studies. It is unclear how people will respond to the new racial question in the future, and these responses could differ by mode of collection and with the subject of the survey. Furthermore, most of this work on developing bridging methods relied on sample data, and small samples at that" (OMB, December 2000: Appendix C, page 23).

Strategies for Users

Given the complexity of race data, the task of bridging race data collected under old and new federal standards is clearly daunting. Several strategies are outlined, most based on the Bridge Report. Results from the evaluation of bridging methods showed that each had strengths and weaknesses. Some methods are easier to use and may be appealing for data users without specialized statistical skills (for example, Whole Assignment Smallest Group, Largest Group Other Than White, and Plurality), but these methods do not take into account the full range of an individual's racial choices. Some methods are statistically more defensible because they are based on an observed distribution (NHIS Fractions and Plurality methods, for example), but the NHIS fractional assignment method requires additional data manipulation that could be cumbersome and unfeasible for the non-specialist data user. In general, the racial categories that were most sensitive to choice of bridging method were the numerically small populations with a high proportion of multiracial respondents, in other words, the American Indian and Alaska Native category, and to a lesser extent, the Asian category.

- A useful guiding principle is that *in the absence of compelling reasons to bridge race data, users should leave multiple racial responses as separate categories, and try to avoid re-allocating multiple responses back to single racial categories.*
- *If the user wants to examine change across the whole racial distribution*, the Plurality method or one of the Fractional Allocation methods provided the closest approximations to a past distribution. The other methods produced a large increase in the American Indian and Alaska Native population and a corresponding decrease in the white population that could not be reasonably attributed to population change over time.
- *If the user is interested in a particular racial category (for example, the American Indian and*

Alaska Native population), choice of method depends on whether the user wants to err on the side of inclusion or exclusion. Using the Smallest Group method or the Largest Group Other Than White method results in including people who may otherwise have selected the larger group in the past (in this case, white). The user will probably have to refer to prior knowledge about the category in making a decision about which bridging method to use. In this example, the data user may know that most people with white/American Indian backgrounds tended to identify as white in previous surveys. Thus, allocating them to the American Indian and Alaska Native category may produce change due to methodology alone.

- *The choice of bridging method also depends on the topic or characteristic examined.* Bridging methods did not affect three health outcomes examined: percent of respondents in poor or fair health; percent of children living with a single mother; and percent of respondents without health insurance. All methods produced comparable and relatively good matches on the health outcomes. However, the choice of bridging methods appeared to affect economic outcomes examined—the unemployment rate and labor force participation rate by race. Therefore, "it is likely that which method is best at matching a reference distribution for outcome measures will depend on the outcome being measured. Unfortunately, the data to assess the best tabulation method for each outcome may never be readily available" (OMB, December 2000: 96).
- *If the user is interested in a numerically small population and wants to maximize numbers for analysis*, the Smallest Group method and the Largest Group Other Than White method would yield larger counts for the category. However, this could raise problems of misclassification of race for a certain proportion of responses.
- *The NHIS Model:* Another strategy is to collect race data directly from clients and use the

findings for bridging purposes. A useful model is the National Health Interview Surveys (NHIS), which ask two questions on race, as described in preceding sections. The first question resembles the race question on the 2000 census and allows people to identify with more than one race. For people who identified themselves as belonging to more than one race, there is a follow-up second question that asks the person to choose the "main" race to which he or she belongs. In this way, multiracial people can be distributed to a single race group based on their responses to the question on "main" race.

If data can be collected using this sequence of two questions on race, a data user can also apply insights from such data to using data from the 2000 census. For example, an analysis of responses to the question of main or primary race among those who had marked white and black on the first question may show that the majority chose black as their main or primary race. If appropriate, a data user may then consider allocating people who marked black and white on the 2000 census into the black category in order to achieve comparability with data sets that have fewer racial categories than the 2000 census.

- *OMB Guidelines for Civil Rights Monitoring and Enforcement:* In addition to the above strategies drawn from the Bridge Report, data users could follow OMB's guidelines concerning the allocation of multiracial people for the purposes of civil rights monitoring and enforcement (OMB, March, 2000). These include:

  -Responses in the single race categories are not to be allocated.

  -Responses that combine one minority race and white are allocated to the minority race.

  -Responses that include two or more minority races are allocated as follows:

If the enforcement action is in response to a complaint, allocate to the race that the complainant alleges the discrimination was based on.

If the enforcement action requires assessing disparate impact or discriminatory patterns, analyze the patterns based on alternative allocations to each of the minority groups.

In the hypothetical case of a black and white multiracial person, this person would be allocated to the black category, in accordance with OMB's guidelines. If the person is black and American Indian, then allocation depends on the circumstances involved.

- Finally, new bridging methods could be developed as more information become available on the multiracial population.

In the meantime, all users of census and other race data should be prepared for some uncertainty during the bridge period. There is currently *no best way to use and compare race data* from the 2000 census with data from previous censuses and other racial data classification systems developed under the old federal standards. Agencies and data users may want to keep in mind the following two points as they consider their options:

- First, for some agencies, the multiracial population among its clients may be quite small. In this case, the problem of bridging race data may be satisfactorily dealt with by allocating the small number of multiracial people to a single race group following OMB's guidelines on allocation for civil rights monitoring and enforcement. These guidelines may become the *de facto* method of dealing with multiracial respondents, although this risks the reintroduction and expansion of the old "one-drop" rule.
- Second, the main and most important consideration for most data users is to focus on the purpose for using race data. For example, let us say that the rate of child poverty for a particular racial group has changed when data from the 2000 census are

compared with previous censuses, and there are questions about whether this is a real change. The analysis of trends in child poverty by racial groups is important, but it is more important that child poverty exists. The main goal is to try to reduce the overall level of child poverty.

CONCLUSIONS

While the 2000 census represents an important turning point in the reporting of racial data, it is important to remind the reader that the history of racial data reporting in the United States is one of change and inconsistency (Lee, 1993). The number of racial categories used in the census has fluctuated considerably over the years. Groups identified by geography (for example, Asians, Pacific Islanders and Aleutian Islanders) have been listed as races in the past, together with the more commonly accepted racial groups, such as blacks and whites. Data on people with varying degrees of white and black ancestries have also been collected by previous censuses. Finally, the racial categorization of groups is changeable. For example, Asian Indians were included in the white race in the 1970 census but were counted in the Asian and Pacific Islander race starting with the 1980 census. Therefore, while the shift to allow multiracial reporting in the 2000 census will certainly pose challenges for data users, it is quite likely that standards on racial reporting will continue to change in the future, just as they have in the past.

Data users are confronted with what seems to be a confusing array of questions and choices for using 2000 census-based data, and for comparing 2000 census data with earlier censuses and other data sets. OMB expects to issue final guidelines on the implementation of the new standards for racial and ethnic data after the March 19 deadline for public comments on the provisional guidelines. Federal agencies are expected to follow these guidelines, which will also

be used by other agencies. Data users will have to make their decisions based on these final guidelines and other factors. The most important of these other factors will be the purpose for which race data are used, the mission and goals of organizations using race data, and the organization's clientele. The transitional period will be confusing, confusion that will be aggravated by the lack of research on the multiracial population. This research must wait for the release of individual-level data from the 2000 census. In the meantime, data users will have to make educated choices and understand the rationale for their choice. As data users negotiate the transition to the new standards of racial reporting, it will help to remain flexible, to stay focused on the purpose of racial data, and to remember that there is no single best option for all purposes and data users.

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Members of the KIDS COUNT Advisory Group on Census 2000:

Suzanne Bianchi
University of Maryland at College Park

Brett Brown
Child Trends, Inc.

Roderick Harrison
Joint Center for Political and Economic Studies

Donald J. Hernandez
State University of New York at Albany

Ken Hodges
Claritas, Inc.

Laura Lippman
National Center for Education Statistics

Louisa Miller
U.S. Census Bureau

Martin O'Connell
U.S. Census Bureau

Matt Snipp
Stanford University

KIDS COUNT Members:

Laura Bevers
Rhode Island KIDS COUNT

Joan Benso
Pennsylvania Partnerships for Children

Mike Crawford
Child and Family Policy Center

Rich Huddleston
Arkansas Advocates for Children & Families

Thomas McDonald
University of Kansas

Debbie Morgan
KIDS COUNT Network

Kelly O'Donnell
New Mexico Advocates for Children & Families

Terry Schooley
University of Delaware

Annie E. Casey Foundation Staff:

William O'Hare
Megan Reynolds

PRB Staff:

John Haaga
Mark Mather
Kelvin Pollard
Kerri Rivers
Cheryl Stauffer

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Opinions expressed in this paper do not necessarily represent the views of the advisory group members.

The Annie E. Casey Foundation
701 Saint Paul Street
Baltimore, MD 21202
www.aecf.org

Population Reference Bureau
1875 Connecticut Avenue, NW, Suite 520
Washington, DC 20009
www.prb.org

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